RIF-1-RSC-LV-120AC/2X21AU - Relay module

2903344

https://www.phoenixcontact.com/us/products/2903344

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Preassembled relay module with screw connection, consisting of: relay base, multi-layer contact relay, plug-in display/interference suppression module, and retaining bracket. Contact switching type: 2 changeover contacts. Input voltage: 120 V AC

Product description

The pluggable electromechanical and solid-state relays in the RIFLINE complete product range and the base are recognized and approved in accordance with UL 508. The relevant approvals can be called up at the individual components in question.

Commercial data

Item number	2903344
Packing unit	10 pc
Minimum order quantity	10 pc
Note	Made to order (non-returnable)
Sales key	C465
Product key	DK651H
GTIN	4046356732109
Weight per piece (including packing)	69.25 g
Weight per piece (excluding packing)	69.25 g
Customs tariff number	85364900
Country of origin	CN

Set consists of

RIF-1-BSC/2X21 - Relay base

2900930

https://www.phoenixcontact.com/us/products/2900930



RIF-1... relay base, for miniature power relay with 1 or 2 changeover contacts or identical solid-state relays, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

REL-MR-120AC/21-21AU - Single relay

2961477

https://www.phoenixcontact.com/us/products/2961477



Plug-in miniature power relay, with multi-layer gold contact, 2 changeover contacts, input voltage 120 V AC

RIF-LV-120-230 AC/110 DC - Plug-in module

2900944

https://www.phoenixcontact.com/us/products/2900944



Plug-in module, for mounting on RIF-1, RIF-2, RIF-3, and RIF-4, with varistor and yellow LED, input voltage: 120 V AC... 230 V AC / 110 V DC ±20 %

RIF-RH-1 - Retaining bracket

2900953

https://www.phoenixcontact.com/us/products/2900953



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-1 relay base, for 16 mm tall miniature power relay and solid-state relay

Technical data

Notes

Notes on operation	FBS 2-6... plug-in bridge for the input side (A2) and FBS-2-8... plug-in bridge for the output side (11/21)

Product properties

Product type	Relay Module
Product family	RIFLINE complete
Application	Universal
Operating mode	100% operating factor
Mechanical service life	approx. 10^7 cycles

Insulation characteristics

Insulation	Safe isolation between input and output
	Basic insulation between the changeover contacts
Overvoltage category	III
Pollution degree	2

Data management status

Date of last data management	12.09.2025

Electrical properties

Service life electrical	see diagram
Maximum power dissipation for nominal condition	0.96 W
Test voltage (Winding/contact)	4 kV_{rms} (50 Hz, 1 min., winding/contact)
Test voltage (Changeover contact/changeover contact)	2.5 kV_{rms} (50 Hz, 1 min., changeover contact/changeover contact)
Rated insulation voltage	250 V AC
Rated surge voltage	6 kV (Input/output)
	4 kV (between the changeover contacts)

Input data

Coil side

Nominal input voltage U_N	120 V AC
Input voltage range	96 V AC ... 138 V AC (20 °C)
Input voltage range in reference to U_N	see diagram
Mains frequency	50/60 Hz
Drive and function	monostable
Drive (polarity)	polarized
Typical input current at U_N	8 mA
Typical response time	3 ms ... 12 ms
Typical release time range	3 ms ... 20 ms
Coil voltage	120 V AC

Protective circuit	Varistor
Operating voltage display	Yellow LED

Output data

Switching

Contact switching type	2 changeover contacts
Type of switch contact	Single contact
Contact material	AgNi, hard gold-plated
Maximum switching voltage	30 V AC
	36 V DC
Minimum switching voltage	100 mV (at 10 mA)
Limiting continuous current	50 mA
Maximum inrush current	50 mA
Min. switching current	1 mA (24 V)
Interrupting rating (ohmic load) max.	1.2 W (at 24 V DC)
Utilization category CB Scheme (IEC 60947-5-1)	AC15, 1.5 A/240 V (N/O contact)
	AC15, 2 A/250 V (N/C contact)
	DC13, 2 A/24 V (N/C contact)
	DC13, 0.2 A/250 V (N/O contact)

Switching: when the gold layer is destroyed

Note	the following values are applicable if a gold layer is destroyed
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (at 10 mA)
Maximum inrush current	12 A (20 ms, N/O contacts)
Min. switching current	10 mA (At 5 V)
Interrupting rating (ohmic load) max.	192 W (at 24 V DC)
	96 W (at 48 V DC)
	60 W (at 60 V DC)
	44 W (at 110 V DC)
	57 W (at 220 V DC)
	2000 VA (for 250 V AC)
Switching capacity	2 A (at 24 V, DC13)
	0.2 A (at 110 V, DC13)
	0.2 A (at 250 V, DC13)
	2 A (at 24 V, AC15)
	2 A (at 120 V, AC15)
	2 A (at 250 V, AC15)

Connection data

Connection method	Screw connection
Stripping length	8 mm

Conductor cross-section rigid	0.5 mm² ... 4 mm²
Conductor cross-section rigid (2 conductors with same cross section)	0.5 mm² ... 2.5 mm²
Conductor cross-section flexible	0.5 mm² ... 4 mm²
	0.5 mm² ... 4 mm² (Ferrule with plastic sleeve)
Conductor cross-section flexible (2 conductors with same cross section)	0.5 mm² ... 2.5 mm²
	0.5 mm² ... 1.5 mm² (TWIN ferrule with plastic sleeve)
Conductor cross-section AWG	20 ... 10 (solid)
	20 ... 12 (flexible)
Tightening torque	0.5 Nm ... 0.6 Nm

Dimensions

Item dimensions

Width	16 mm
Height	90 mm
Depth	75 mm

Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94 (Housing)	V2 (Housing)

Environmental and real-life conditions

Ambient conditions

Degree of protection (Relay base)	IP20 (Relay base)
Degree of protection (Relay)	RT III (Relay)
Ambient temperature (operation)	-40 °C ... 50 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Approvals

Corrosive gas test

Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

Standards and regulations

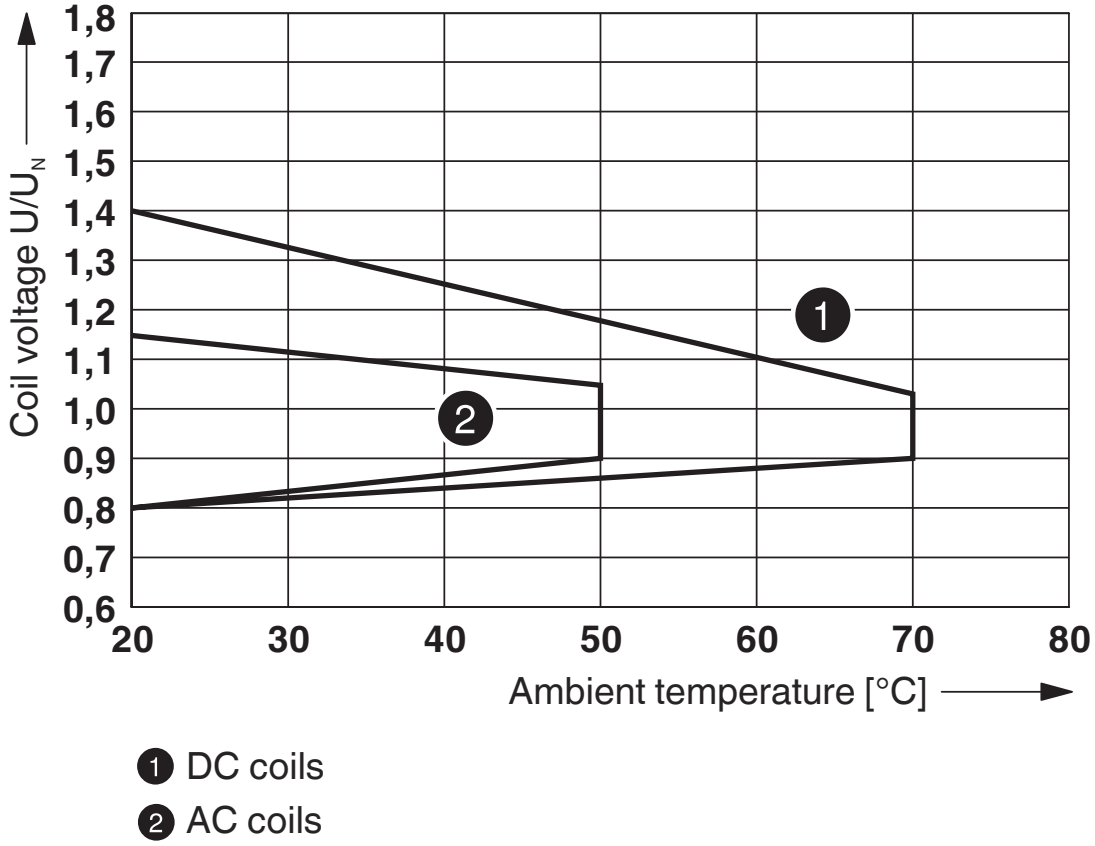
Standards/regulations	IEC 60947-5-1

Mounting

Mounting type	DIN rail mounting
Assembly note	in rows with zero spacing
Mounting position	any

Drawings

Diagram

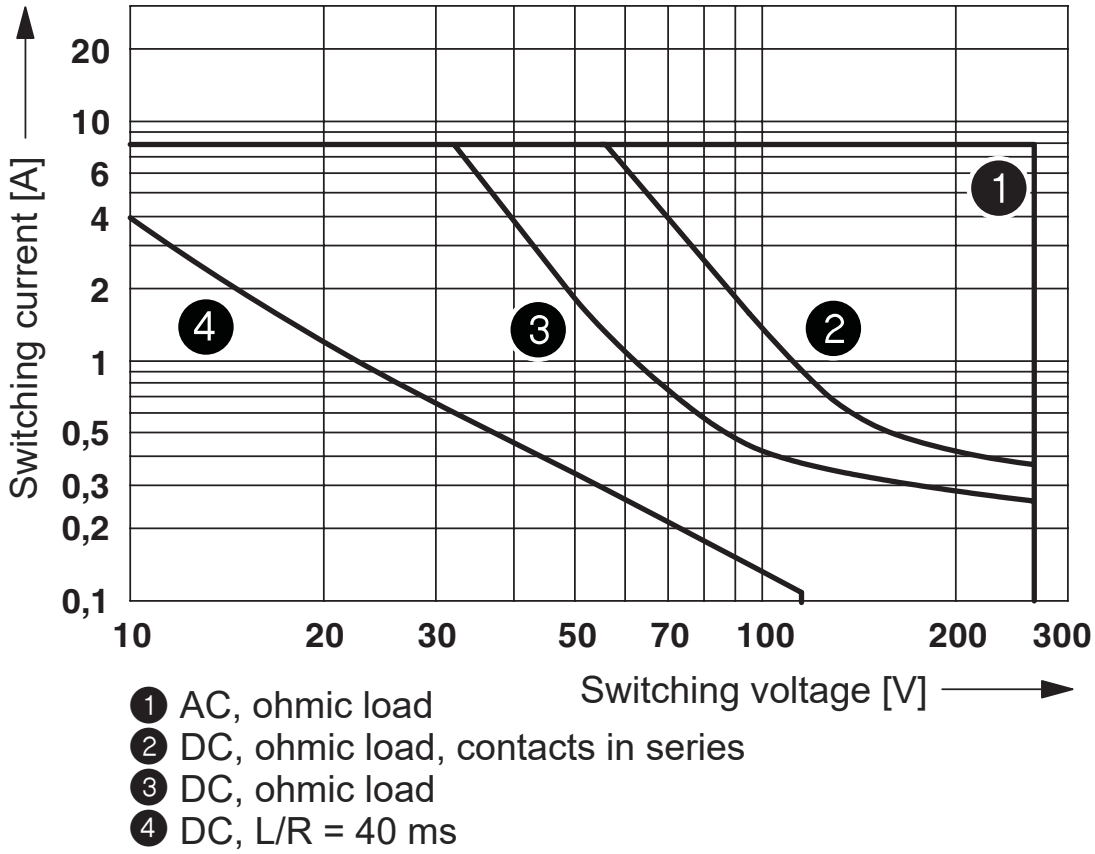


1 DC coils

2 AC coils

Operating voltage range

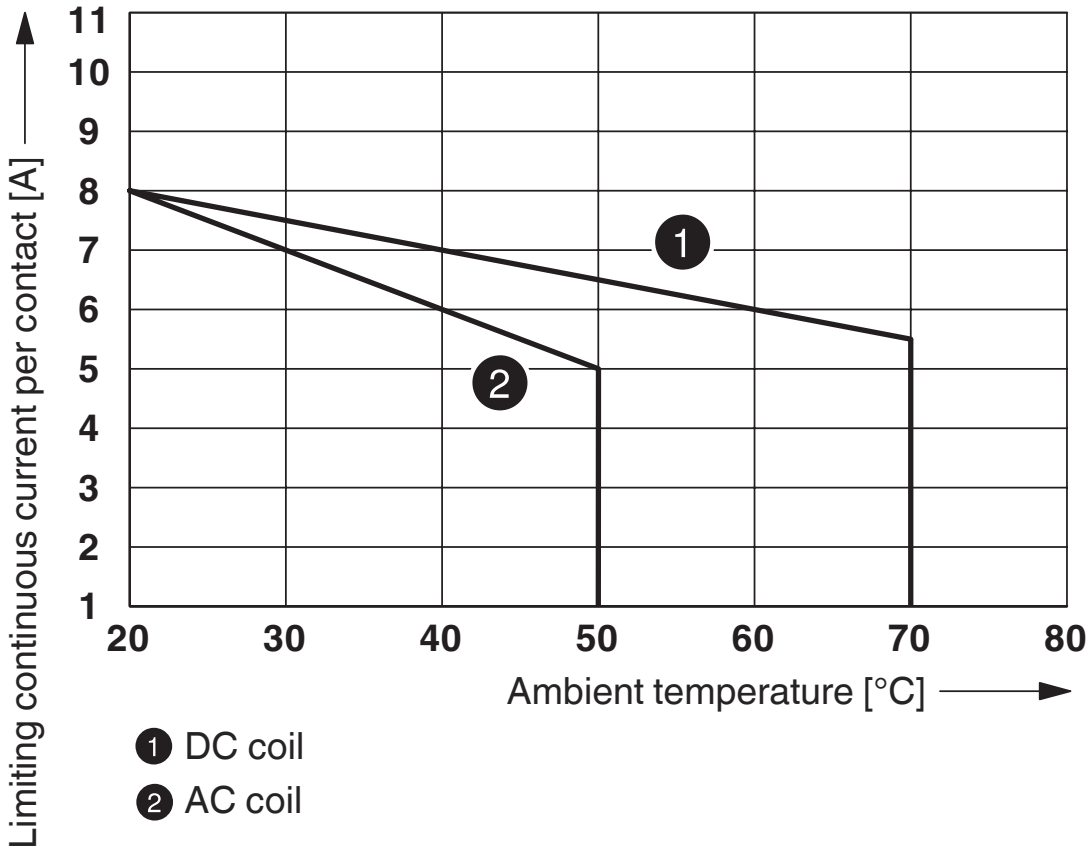
Diagram



1 AC, ohmic load
2 DC, ohmic load, contacts in series
3 DC, ohmic load
4 DC, L/R = 40 ms

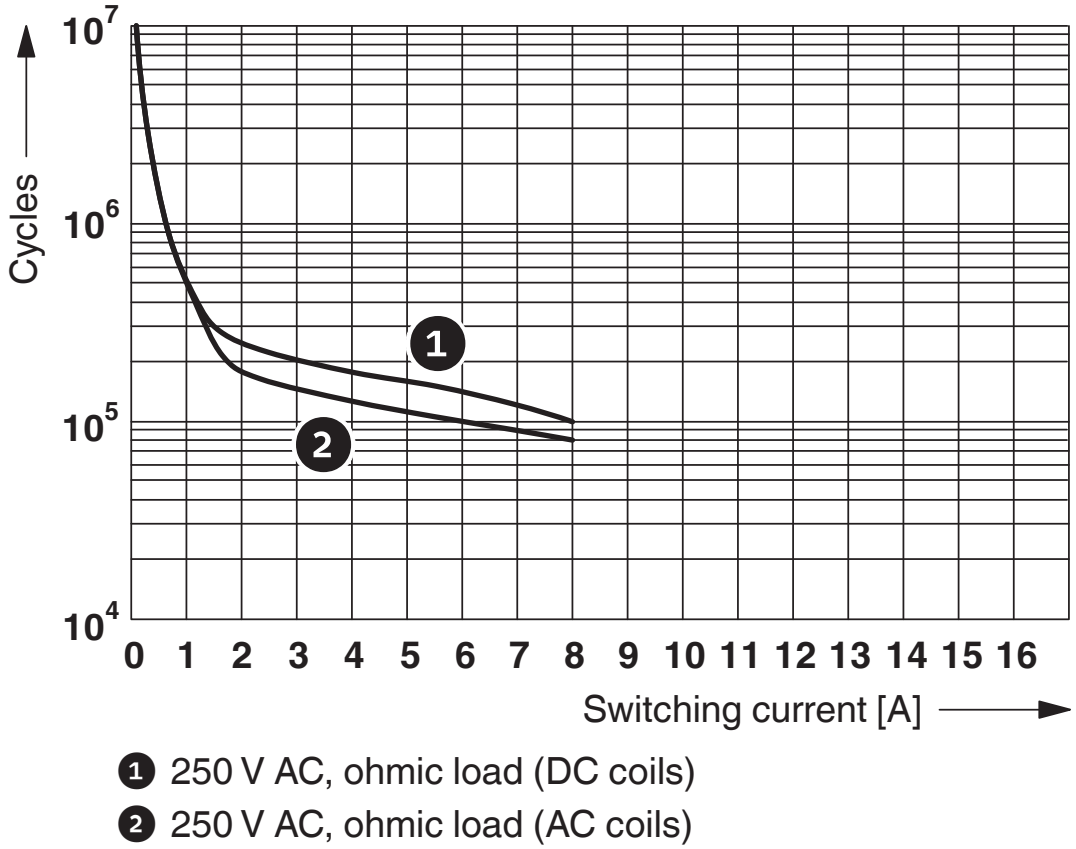
Interrupting rating

Diagram



Contact derating

Diagram

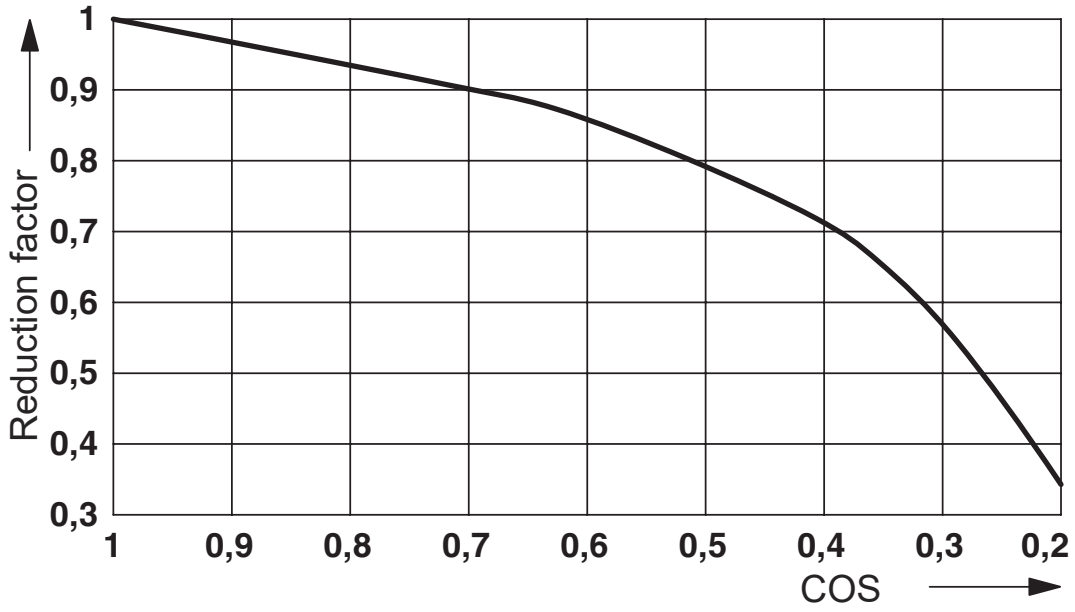


1 250 V AC, ohmic load (DC coils)

2 250 V AC, ohmic load (AC coils)

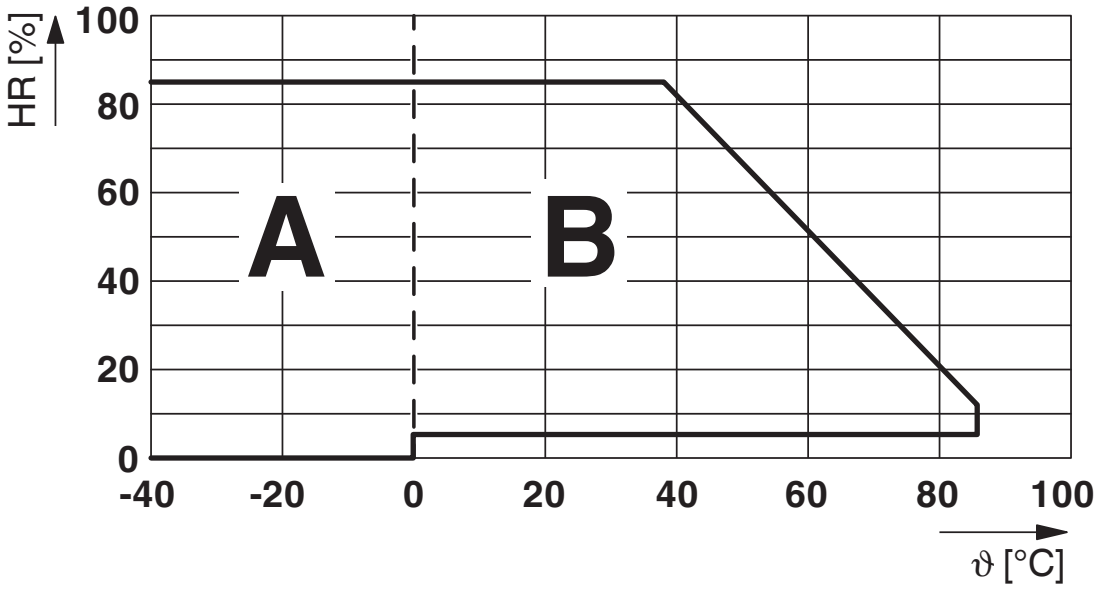
Electrical service life

Diagram



Service life reduction factor

Diagram

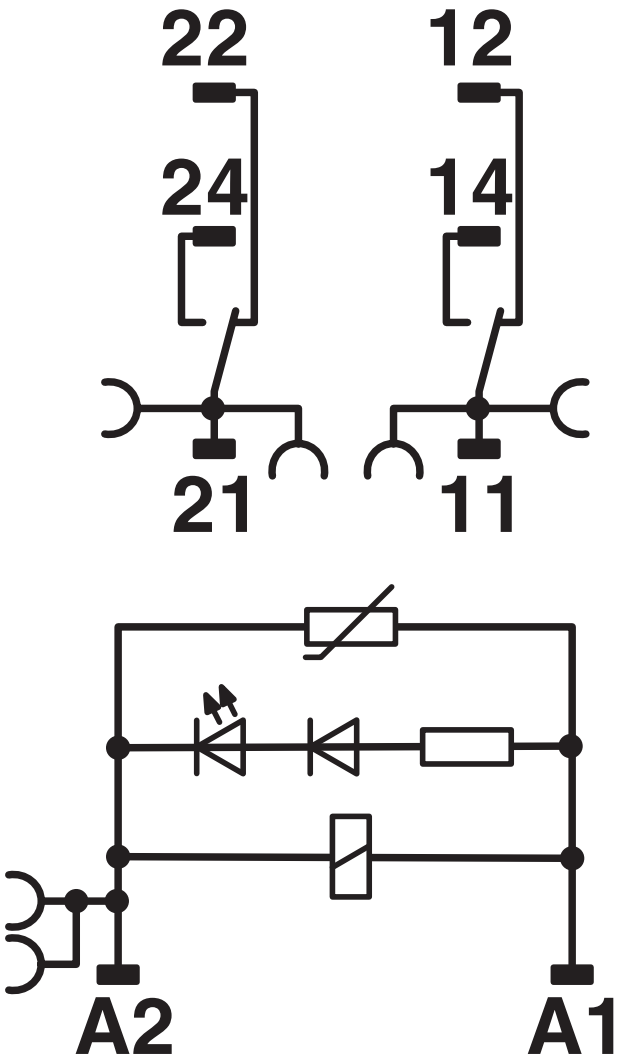


Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures ≤ 0°C must be prevented
Area B: Condensation at ambient temperatures > 0°C must be prevented

On 30 full days that are naturally distributed across an entire year, a humidity level of 95% is permissible at an ambient temperature ≤ 25°C.

Circuit diagram



AC coils

Classifications

ECLASS

ECLASS-13.0	27371601

ETIM

ETIM 9.0	EC001437

UNSPSC

UNSPSC 21.0	39122300

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	6d4e7b01-edd7-4d4f-aecf-8c847cbfc008

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